antecedent basis. Claim 2 is amended as previously requested by the Examiner to eliminate a redundancy in the claim language. Support for the amendments is found in the claims themselves.

The Applicant respectfully requests entry of the claim amendments.

II. Rejection under 35 U.S.C. §112, First Paragraph

Claims 1-9 are rejected under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Applicant respectfully traverses the present rejection.

Referring to claims 1-9, the Examiner concedes that the specification may provide guidelines on how to make the claimed promoter nucleotide sequence. However, the Examiner alleges that the specification does not describe how to use claimed promoter sequence.

The pending claims recite, in part, "said [promoter] nucleotide sequence has at least 80% identity to 18 sequential nucleotides of ... SEQ ID NO 3 (pA)". The present limitation, in part, defines the metes and bounds of the claimed invention. The Applicant claims the genus of nucleotide sequences that have 80% identity to 18 sequential nucleotides of SEQ ID NO:3 which also initiate transcription of an operably linked heterologous nucleotide sequence in a plant cell. The specification discloses how to make the claimed promoter nucleotide sequences, how to test a candidate sequence for expression of a heterologous nucleotide sequence in a plant cell, and includes numerous working examples.

For instance, promoter nucleotide sequence pB initiates

transcription of an operably linked heterologous nucleic acid sequence in a plant cell (see, for example, Table 2 on page 58, line 14) and has at least 80% identity to 18 sequential nucleotides of SEQ ID NO 3 (see, for example, the C-terminal 18 sequential nucleotides of SEQ ID NO 4 (pB) which have 100% sequence identity to the C-terminal 18 sequential nucleotides of SEQ ID NO 3. Accordingly, promoter nucleotide sequence pB is a claimed promoter nucleotide sequence.

In another example, the CVP1 sequence has at least 80% identity to 18 sequential nucleotides of SEQ ID NO 3. Activity data for the CVP1 promoter operably linked with a heterologous nucleic acid sequence demonstrates that CVP1 initiates transcription in plant cells (see, e.g., page 46, lines 21-24). Accordingly, CVP1 is a claimed promoter nucleotide sequence.

In still another example, CVP2 itself (set forth in SEQ ID NO 3) has at least 80% identity to 18 sequential nucleotides of SEQ ID NO 3. Furthermore, the specification asserts and demonstrates that CVP2 is a strong promoter in plant cells (see, e.g., page 46, line 27 through page 47, line 2). Accordingly, CVP2 is a claimed promoter nucleotide sequence.

In even further examples, 14 preferred promoter nucleotide sequences, wherein each sequence has at least 80% identity to 18 sequential nucleotides of SEQ ID NO 3 are disclosed on page 20, lines 22-26 (including promoter pB, discussed above). Activity data for each promoter nucleotide sequence driving expression of an operably linked heterologous nucleic acid sequence is disclosed, for instance, in Table 2 (page 58), Example 10, Example 11, and, as presented graphically, in Figures 9, 10, and 11.

The test for enablement is whether or not one of skill in the art would be able to make and use the claimed invention in

view of the teachings of the specification and the knowledge in the art. The Applicant respectfully submits that one of ordinary skill in the present art typically has an advanced degree and years of experience in plant molecular biology. The use of promoter sequences was routine for one of ordinary skill in the art of plant molecular biology at the time the present application was filed.

In view of the specification, one of ordinary skill in the art is able to make the claimed promoter nucleotide sequences (see above and, for example, page 23, lines 1-9), determine whether or not the sequence has at least 80% identity to 18 sequential nucleotide of SEQ ID NO:3, and determine whether or not the sequence initiates transcription of an operably linked heterologous sequence in a plant cell (see above and, for example, page 58, line 15). In view of the present specification and the high level of skill in art, it would have been routine work for one of skill in the art to make and use the promoter nucleotide sequence as claimed. The specification asserts and demonstrates with working examples enablement of the claimed promoter nucleotide sequence. Accordingly, the test for enablement has been met.

The Examiner has not provided any evidence to rebut the applicants' assertion of enablement, any evidence to rebut disclosures in the specification of actual promoter nucleotide sequences and their corresponding activity in plant cells, or any evidence that one of ordinary skill cannot make and use the claimed invention in view of the specification and knowledge in the art . No *prima facie* case for lack of enablement has been made. The Applicant respectfully requests that the present rejection be withdrawn.

Referring to page 3 of the action, the Examiner further

alleges, "the GUS promoter assay along with the deletional analysis provided in the specification is merely an invitation to try to find a sequence that is 80% identical to 18 bps of SEQ ID NO:3". The Applicant respectfully submits that the pending claims do not recite elements of "the GUS promoter assay along with the deletional analysis ... to find a sequence that is 80% identical to 18 bps of SEQ ID NO:3". The present rejection should be withdrawn.

III. Rejection under 35 U.S.C. §102(b)

Claims 1-9 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Calvert et al. The Applicant respectfully traverses the present rejection.

Referring to claims 1-7, each claim recites, in part, an isolated nucleic acid molecule. The specification discloses that an isolated nucleic acid molecule of the present invention does not contain the adjacent sequences of the CsVMV genome (see, for example, page 14, lines 27-31). The specification further discloses that a promoter nucleic acid sequence of the present invention is separated from other portions of the CsVMV genome, or is recombined with a heterologous sequence (see, for example, page 14, line 31 to page 15, line 2).

Calvert et al. does not teach an isolated nucleic acid molecule comprising a promoter nucleotide sequence as recited in the present claims and interpreted in view of the specification. Anticipation can only be established when each and every element of the claimed invention is disclosed in a single prior art reference. Because Calvert et al., does not teach the claimed isolated nucleic acid molecule, separated from the genome of CsVMV, Calvert et al. cannot be used to establish anticipation. Therefore, the applicant respectfully requests that the Examiner

withdraw the present rejection of claims 1-7.

Referring to claims 8 and 9, each claim recites, in part, a promoter nucleotide sequence that is operatively linked to a heterologous nucleic acid sequence (see the present claims for limitations on the promoter nucleotide sequence). The specification of the present invention teaches that the heterologous nucleic acid sequence recited in claims 8 and 9 is one that originates from a foreign source (or species) or, if from the same source, is modified from its original form (see, for example, page 13, lines 20-31).

Calvert et al. does not teach the claimed promoter nucleotide sequence operably linked to a heterologous nucleotide sequence. Because Calvert et al. does not teach each and every element of the present claims, it cannot be used to establish anticipation of the claimed invention. Therefore, the applicant respectfully requests that the Examiner withdraw the present rejection of claims 8 and 9.

CONCLUSION

Applicants believe that no new matter is added by way of the present amendment and response. Applicants respectfully request entry of the amendments and consideration of the remarks herein. In view of the amendments and remarks, the Applicants respectfully request that pending claims 1-9 proceed to allowance.

The Examiner is requested to contact the representative for the Applicants, to discuss any questions or for clarification. If there are any further fees associated with this response, the Director is authorized to charge our Deposit Account No. 19-0962.

Respectfully submitted,

Feb. 13, 2003
Date

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Appendix

1. (Twice Amended) An isolated nucleic acid molecule comprising a promoter nucleotide sequence that initiates transcription of an operably linked heterologous nucleic acid sequence in a plant cell wherein said promoter nucleotide sequence has at least 80% identity to 18 sequential nucleotides of the cassava vein mosaic virus (CsVMV) promoter shown in SEQ ID NO 3 (pA).

2. (Three Times Amended) The nucleic acid molecule of claim 1 which comprises a nucleic acid sequence selected from the group consisting of CVP1, CVP2, pA, pB, pC, pD, pE, pΔB, pΔC, pΔD1, pΔD2, pΔD3, pΔDE1, pΔDE2, pΔDE3 and pΔE, having the respective sequences shown in SEQ ID NOs 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, and 17[, respectively].

8. (Once Amended) A vector comprising a promoter nucleotide sequence that is capable of initiating transcription of an operably linked heterologous nucleic acid sequence in a plant cell wherein said promoter nucleotide sequence has at least 80% identity to 18 sequential nucleotides of the cassava vein mosaic virus (CsVMV) promoter shown in SEQ ID NO 3 (pA) and is operatively linked to a heterologous nucleic acid sequence.